Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Reaction Rate Lab Writeup**

**Paragraph 1: Introduction**

* Purpose of the lab
* Definition of reaction rate
* Definition of collision theory

**Paragraph 2: Surface Area**

|  |  |
| --- | --- |
| *CLAIM* | Increasing the surface area of reactants in a chemical reaction (increases/decreases) the rate of the reaction. |
| *EVIDENCE* | * The reaction between solid calcium carbonate and HCl progressed (faster/slower) than the reaction between powdered calcium and HCl. * Include your data (# of seconds, etc.) |
| ***REASONING*** | * **Explain WHY surface area affects reaction rate in terms of collision theory** |

**Paragraph 3: Temperature**

|  |  |
| --- | --- |
| *CLAIM* | Increasing the temperature of a chemical reaction (increases/decreases) the rate of the reaction. |
| *EVIDENCE* | * The reaction between Alka-Seltzer and water progressed the fastest using (cold/room temperature/warm) water. * GRAPH of data (temperature on x-axis, length of reaction on y-axis)   + Title   + Scatterplot with line of best fit   + Labeled axes with units * Describe your data in words (temperature and # of seconds) |
| ***REASONING*** | * **Explain WHY temperature affects reaction rate in terms of collision theory** * **Discuss a real life application of temperature and reaction rate** |

**Paragraph 4: Concentration**

|  |  |
| --- | --- |
| CLAIM | Increasing the concentration of reactants in a chemical reaction (increases/decreases) the rate of the reaction. |
| EVIDENCE | * The reaction between zinc and HCl progressed the fastest using HCl with a concentration of (1M/3M/6M). * Include your data (can be observational for this section) |
| **REASONING** | * **Explain WHY reactant concentration affects reaction rate in terms of collision theory** |

**Paragraph 5: Use of a Catalyst**

|  |  |
| --- | --- |
| *CLAIM* | The use of a catalyst (increases/decreases) the rate of the reaction. |
| *EVIDENCE* | * Define catalyst * The hydrogen peroxide reaction was catalyzed by (CaCl2, KNO3, Fe(NO3)3, NaCl). * Include your data (signs of a reaction occurring) |
| ***REASONING*** | * **Explain WHY catalysts affect reaction rate in terms of collision theory** * **Discuss how catalysts are relevant to your life** |

**Works Cited: MLA Format**

* Cite sources used for real life application sections of report (and any other information that you researched)
* You must include in-text citations in addition to a works cited page